

Appln No. 10/821,266  
Amdt date June 14, 2007  
Reply to Office action of March 14, 2007

### REMARKS/ARGUMENTS

Claims 1-5, 7-11, 13-18, 20, 36, 38 and 42-44 are pending in this application. Claims 1 and 8 have been amended to remove the previously added limitation for the surface roughness, and are now in their original form. New claims 42-44 have been added to reinstate claims 6, 12, and 19, respectively. Claims 7 and 20 have been amended to change their dependency to new claims 42 and 44, respectively. Claims 21-35, 37, and 39-41 have been canceled as directed to a non-elected invention. Applicant reserves the right to pursue the canceled claims in one or more divisional applications.

In the October 27, 2006 Office action, original claims 1-5, 8-11, 14-18, 36 and 38 were rejected as anticipated by Uemura et al. (US 6,239,547) and original claims 6, 7, 12, 13, 19 and 20 were rejected as obvious in view of Uemura et al. In an attempt to hasten allowance, applicant added the surface roughness limitation to independent claims 1 and 8, canceled claims 6, 12, and 19, and argued for the allowance of all claims over Uemura et al. In the March 14, 2007 final action, despite applicant's amendment of the claims, the examiner maintained the rejection of claims 1-5, 7-11, 13-18, 20, 36, and 38 as obvious in view of Uemura et al. Applicant requests reconsideration.

According to independent claims 1, 8, and 14, the claimed composite particles each include a material "which is partially embedded within the particle and which partially protrudes from the surface of the particle." The examiner asserts that Uemura et al. teach this feature, citing column 12, lines 49-58 and Figs. 7C-7E. However, contrary to the examiner's assertions, rather than teaching material that is *partially embedded* and *partially protruding* from the surfaces of individual particles, Uemura et al. teach that needle-like bundles of carbon protrude from *groups of individual particles*. Unlike the claimed invention, none of the bundles actually *protrudes from any individual metal particle*. In effect, by teaching such fundamentally different structure, Uemura et al. teach away from the claimed invention.

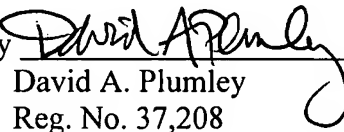
Furthermore, not only do Uemura et al. teach away from the invention by teaching a structurally different material, the material of the claimed invention exhibits significantly

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improved physical properties over materials such as those taught by Uemura et al. With this response, applicant submits the Declaration of Tae-Il Yoon, one of the named inventors. As explained by the inventor, electron emission sources were made according to the teaching of Uemura et al. (Example A,) and according to the claimed invention (Example B.) The resulting electron emission sources were then tested, and as shown in the graph at paragraph 6, the electron emission source of the claimed invention exhibited significantly improved electron emission characteristics over that made according to Uemura et al. Applicant submits that independent claims 1, 8, and 14 are allowable over the cited art, as are the remaining dependent claims due to their dependency on claims 1, 8, and 14.

Claims 1-5, 7-11, 13-18, 20, 36, 38 and 42-44 remain in this application. Because Uemura et al. fail to teach or suggest the structure as claimed, and in fact, teach away from the claimed invention, and further, because devices of the claimed inventions exhibit surprisingly improved physical properties over the devices taught by Uemura et al., the claims of the present invention are allowable over the cited art. Applicant requests allowance of the claims. However, if there are any remaining issues which can best be addressed by telephone, the examiner is asked to contact applicant's counsel at the number below.

Respectfully submitted,  
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